

Australian Hydroid, of which, however, he possessed specimens of only the dried periderm. It would seem to offer one of the connecting forms by which the Campanularian pass into the Sertularian Hydroids through *Coppinia*, *Reticularia*, and *Grammaria*; but, in the absence of all knowledge of the living animal, it is impossible to speak with decision as to its affinities.

Lineolaria spinulosa, Hincks.

XXXVI.—*Descriptions of new Genera and Species of Eumolpidae from the Collection of the Rev. Hamlet Clark.* By the Rev. T. A. MARSHALL.

THE time has not yet arrived when a satisfactory arrangement of this interesting yet difficult group can be hoped for by entomologists. The literature of the subject is in so confused and imperfect a state, and the undescribed forms are so numerous, that the materials for generalization are yet wanting, and much time must elapse before a sufficient groundwork for the systematist can be established. The existing materials require to be thoroughly sifted, and several hundreds of undescribed species to be defined, before the work of organization can begin. To the former of these tasks, with a view to attempting the two latter, the present writer has been led to direct his attention; he is therefore enabled to speak with some certainty of the nature of the difficulties to be encountered. With respect to the hitherto published genera and species, it is perhaps not too much to say that one-half are insufficiently characterized, and rather impede than facilitate future labours. The writers in whose widely scattered works these descriptions are to be found vary much, as may be supposed, in their style and accuracy: a few only have performed their task in a perspicuous and permanent manner. Foremost among these is Mr. Baly, whose labours in this department are beyond all praise for minute accuracy and clearness. The descriptions of Prof. Boheman, of Blanchard, Germar, Thomson, Say, Lucas, Gerstäcker, Leconte, and a few others are easy of verification. It is to be regretted that most of the other authors whose names are attached to described species have contented themselves for the most part with a brief and insufficient diagnosis, and often a mere indication. A few only of the genera can be regarded as permanently established: even the well-known *Colaspis*, as at present defined, will not exclude a number of forms obviously distinct. The uncharacterized genera of Dejean's Catalogue embrace for the most part apparently natural groups, or at least they may be made to do so by a system of judicious exclusion. We will therefore first direct our attention to them, from a conviction that the conver-

sion of any one of these from a mere *nominis umbra* to a substantial reality will be a step in the right direction.

The following list will show which of Dejean's or Chevrolat's genera have been described; an asterisk prefixed denotes that they are only described imperfectly. We have also prepared a catalogue of described species of the entire group of the *Eumolpidæ*, which is far too long for insertion here; but, as it is necessarily in a state of progressive improvement, its publication may well be delayed to a future occasion. In the following list, small capital letters indicate the name now adopted: references to the descriptions are added, as their insertion may be of some utility.

- *COLASPIS, *Fab.*—Laporte, *Silb. Rev.* i. 21.
- *Pleuraulaca, *Chevr.*, now COLASPOIDES.—Laporte, *ibid.*
NODA, *Chevr.*—Blanchard, in Gay's *Hist. de Chile*, t. v. p. 546.
- *ACIS, *Chevr.*, now COLASPOSOMA.—Laporte, *Silb. Rev.*
Dia, *Dej.*, now COLASPIDEA.—Laporte, *ibid.*, and Redt. *Fn. Austr.*
FIDIA, *Dej.*—Baly, *Journ. Ent.* vol. ii. (1863) p. 153.
- *METACHROMA, *Chevr.*—Leconte, *Proc. Acad. Philad.* 1858, p. 85.
- *TYPOPHORUS, *Chevr.*—Erichs. *Archiv, Consp. Fn. Peruv.* (1847), p. 163.
BROMIUS, *Chevr.*—Redt. *Fn. Austr.*—Partly ADOXUS, Kby. *Fn. B. Am.* p. 209, and Baly, *Journ. Ent.* ii. (1863) p. 149.
- EUMOLPUS, *Kugelan.*—Weber, *Obs. Entom.* p. 28.
Platycorynus, *Chevr.*, now CORYNODES, Hope, *Manual*, pt. 3. p. 162, and Gerstäcker in *Peters's Reise nach Mossambique*, p. 335.
- CHRYSOCHUS, *Chevr.*—Redt. *Fn. Austr.*
EURYOPE, *Dalman*, *Ephem. Entom.* p. 17.
- *HETERASPIS, *Chevr.*—Leconte, *Coleopt. of Kansas and East New Mexico*, p. 23, in *Smithsonian Contributions to Knowledge*, vol. xi. 1860.
- *GLYPTOSCELIS, *Chevr.*—Leconte, *Proc. Acad. Philad.* 1859, p. 81.
Eubrachys, *Dej.*, now PSEUDOCOLASPIS, Laporte, *Silb. Rev.* i. 23.
- MYOCHROUS, *Chevr.*—Blanchard, in Gay's *Hist. de Chile*, t. v. p. 543.
- PACHNEPHORUS, *Chevr.*—Redt. *Fn. Austr.*

Colaphus is omitted, as not belonging to the *Eumolpidæ*. *Bromius* will probably have to be retained (as only partly synonymous with *Adoxus* of Kirby and Baly) for the reception of *B. hirtus*, *Fab.*, and its allies, which are excluded by Mr. Baly from the genus *Adoxus*. *Bromius* (one of the names of the god of wine) was adopted with special reference to the habits of *B. vitis*, *Fab.*, which destroys the vines in Southern Europe. It would have been better therefore to have preserved the name *Bromius* than Kirby's *Adoxus*. That writer proposed, it would seem, to discard *Eumolpus* altogether, inventing the two names

Adoxus (inglorious) and *Eudoxus* (glorious) instead. The former appellation he applies to the small dark species of Europe, and proposes the latter for *Eumolpus ignitus*, Fab., and its congeners, the large gorgeous beetles of South America. Such inconsistencies, however, involving the mere propriety of names, are of little moment.

It will be seen, then, that of the 59 genera proposed in Dejean's Catalogue only 19 have any real existence, leaving us a balance of 40 to describe or reject, as the groups indicated may seem to require. Hardly any of these genera can be regarded as unnecessary, or wholly superseded by the described genera of more modern authors. So great is the diversity of the species they have been forced to include, that the old names may still in most cases be utilized. For example, Mr. Baly's genus *Geloptera* has hitherto been included under *Edusa*, chiefly, it would seem, because the forms are all Australian. These two genera are now sufficiently distinct; and the true *Edusa* only needs characterization to make it a good genus. No valid reason can be given why names long known to collectors, and recognized as convenient expressions, should be suffered to fall into oblivion. As a matter of convenience, they should rather, when possible, be described and perpetuated; thus the collector will find that, instead of having to learn a new name, the old idea fixed in his mind has, to his great advantage, assumed a real and permanent existence. For the future, it is to be hoped that every inventor of MS. names will meet with the treatment due to so silly and reprehensible a practice.

I proceed to describe the first uncharacterized genus of Dejean's Catalogue, *Metaxyonycha*, Chev., separated by him from *Colaspis* upon slight, although perhaps sufficient, grounds. Fourteen species are before me, presenting considerable diversity of appearance. I have indicated the group or subgenus to which each appears to belong, under each species. I purposely abstain from making these subdivisions until the remainder of the species shall have become known to me. The differences to which I refer concern chiefly the striae of the elytra, the convexity of the thorax, and other details, none of which appear to be of sufficient value to justify the multiplication of genera.

Genus METAXYONYCHA*, Chev., D'Orb. Dict.

Colaspis, Fab. *Colaspis* (pars), Dej. Cat.

Caput verticale, thoraci haud ad oculos usque insertum, inter oculos

* I have spelt this name correctly for the first time. The derivation ($\mu\epsilon\tau\alpha\chi\acute{\omicron}\nu$ and $\delta\upsilon\nu\chi\acute{\omicron}$) is given by Chevrolat in D'Orbigny's Dict. s. v. *Metazyonycha*. Cf. a similar mistake in *Lozotania*, *Lozogramma*, for *Loxot.*, *Lozogr.* (Lepidoptera), &c.

impressum; oculis rotundatis, plus minus prominulis, rarius emarginatis.

Antennæ infra oculos insertæ, filiformes, tenues, corpore dimidio longiores: articulus primus oblongus, robustus; secundus quadruplo minor; tertius duobus primis conjunctim visis æqualis, quarto longior, gracilis; quintus ad undecimum æquales; ultimus brevissimus, gracilior, obtuse conicus.

Labrum oblongum, convexum, angulis anticis rotundatis: mandibulæ bidentatæ.

Palporum maxillarium, articulus ultimus elongatus, apice obtusus, articulo secundo æqualis; sequentes apicem versus incrassati; tertius dimidio brevior præcedente et sequente.

Thorax transversus, subquadratus, lævis, angulis anticis subito deflexis, acutiusculis; lateribus marginatis, medio obsoletius bidentatis vel bisinuatis vel denique muticis; basi truncatus, sæpe utrinque foveolatus.

Scutellum parvum, triangulare, apice obtuso, læve, rarius punctulatum, interdum elytris non concolor.

Antepectoris segmentum antero-laterale triquetrum, thoracis angulum non attingens.

Prosternum postice attenuatum, superficie fere æquata; in *Colaspide* idem medio præminet.

Mesosternum antice bisinuatum, angulis anticis rotundatis, posticis acutiusculis.

Elytra thorace latiora, plus quadruplo longiora, oblonga, parallela, dorso convexa, posterius lente declivia (in *M. chlorophana* &c. deplanata, apice subito clausa); punctato-striata, intervallis plus minus costatis (in *M. chlorophana* haud costatis); alis amplis.

Pedes elongati, graciles, femoribus (præsertim posticis) nonnihil incrassatis; *tibiis intermediis extus ante apicem plus minus emarginatis*; tarsorum articulo primo sequentibus duobus æquali; unguiculis simplicibus, intus ad normam hujus familiæ appendiculatis.

Type of the genus, *Colaspis quadrimaculata*, Oliv.

The characters of this genus, taken separately, are almost identical with those of *Colaspis*; but the different facies, representing the aggregate of numerous small discrepancies, is sufficient to separate the two. The middle of the prosternum is more or less protuberant in *Colaspis*; in the present genus it is almost plane. The intermediate tibiæ are not emarginate in *Colaspis*. The head and thorax of *Metaxyonycha* are smaller in proportion, and the latter less profoundly punctured, more obsoletely dentated at the sides, more convex anteriorly, and more rapidly deflexed towards the anterior angles. The antennæ and legs are longer and more slender.

Some of the species are the largest of the group, and all are natives of tropical America. The typical colour is testaceous,

with or without cyaneous blotches or black dots, usually four in number, upon the elytra, which, in a few instances, are wholly cyaneous. The thorax is always testaceous.

Four species have hitherto been described—*4-maculata*, Oliv., *granulata* and *chloroptera*, Germ., and *testacea*, Fab. Chevrolat (D'Orbigny's Dict. s. v. *Metazyonycha*) gives *Eumolpus pictus*, Perty, as appertaining to the genus. I have a specimen of this insect before me, from the Marquis la Ferté's collection, where it stands as *Endocephalus pulchellus*, Dej. It belongs to a widely different group, and will probably form a new genus, allied to *Endocephalus*.

Eighteen or twenty undescribed species appear to exist in collections. Those which I have before me may be thus tabulated:—

I. Elytra testacea.

A. Immaculata, costata.

α . costis alternis altius elevatis *granulata*, Germ.

β . costis omnibus æqualibus; antennis

* testaceis, medio nigris *testacea*, Fab.

** nigris, basi testaceis *Tejucana*, ined.

B. Maculata.

α . maculis magnis cyaneis.

* maculis 2 maximis *connexa*, ined.

** maculis 4-6; tarsis

† obscuris *crucifera*, ined.

†† testaceis; anteun. artic. 8^{vo}.

§ testaceo *4-maculata*, Oliv.

§§ nigro; antennæ

‡ graciles, colore

¶ fusco, basi testaceæ *chlorospilota*, ined.

¶¶ totæ testaceæ *humilis*, ined.

‡‡ hoc in genere crassiusculæ *4-notata*, Dej., ined.

β . punctis 4 nigris; punctis anterioribus sitis

* in callo humerali *humeralis*, ined.

** medio inter marginem et suturam *tetrasticta*, ined.

II. Elytra cyanea v. viridia.

α . costata, costis completis *tricolor*, Perty.

β . striatopunctata, costis apicalibus; margine

lateralis

* testaceo *chloroptera*, Germ.

** concolore *amasia*, ined.

Metaxyonycha connexa, sp. ined.

M. oblonga, convexa, testacea; antennarum articulis 4-12 nigris; thorace nitido, parce punctato: elytris costatis, punctatis, punctis inter costas gemellatis; singulis macula magna oblonga cyanea, medio intus emarginata.

Long. lin. $5\frac{1}{4}$, lat. hum. 2 lin.

Head very finely punctured, more strongly in the interocular fovea: eyes small, æneous; mandibles tipped with black. First

three joints of the antennæ testaceous, the rest fuscous. Thorax faintly emarginate at the sides, without denticulation: disk smooth, shining, with irregular punctures, much larger than those of the head; in the middle an impunctate space. Scutellum shining, impunctate. Each elytron with eight smooth costæ (exclusive of the sutural and lateral margins); the first, next the suture, continued to the apex; the second and eighth branching from a common stem near the apex, and including within their fork the third to the seventh. The fourth and sixth likewise originate from a common stem, which unites with the second near the apex. The interstices punctate-striate, the punctures geminated. Each elytron with a large, oblong cyaneous blotch extending four-fifths of its length, bordered all round with testaceous, and emarginate in the middle of its interior edge. Extreme tips of the tibiæ and the whole tarsi reddish brown; the rest entirely bright testaceous, deeper on the head and thorax.

Brought from Tejuca, Brazil, by the Rev. H. Clark.

Metaxyonycha crucifera, sp. ined.

M. testacea, antennarum articulis 4-12 nigris; thorace elytris multo angustiore, lateribus medio indistincte subbidentatis; elytris haud costatis, fortiter confertim subseriatim punctatis, singulis plagis duabus magnis cyaneis.

Long. lin. 4, lat. hum. $1\frac{3}{4}$ lin.

Very similar to *M. connexa*, but distinguished by having the thorax much narrower in proportion, and very obsoletely bidentate at the middle on each side. Elytra punctate-striate, the striæ indistinctly geminated; the interstices between each pair smooth, slightly raised, but not costate as in *M. connexa*. Each elytron with a large cyaneous blotch, bisected at right angles by a narrow testaceous stripe, forming four cyaneous spots upon the back; the two anterior spots quadrangular, rounded in front; the two posterior triangular, nearly reaching the apex. The testaceous suture and the transverse stripe form together a Roman cross, from which the species is named. In other respects similar to *M. connexa*.

Hab. Mexico. From Thomson's collection.

Metaxyonycha chlorospilota, sp. ined.

M. testacea, subnitida, antennarum articulis 6-12 nigris; thorace parce punctulato, lateribus medio edentatis: elytris subcostatis, punctato-striatis, punctis inter strias gemellatis; singulis maculis duabus cyaneis, altera humerali, altera pone medium laterali.

Long. lin. $4\frac{1}{2}$, lat. hum. $1\frac{3}{4}$ lin.

Similar to the two preceding, but subnitidous and more

faintly punctured; the less glossy appearance is due to a very minute aciculation, visible under a strong lens everywhere between the punctures, and especially on the thorax. Elytra each with eight smooth, subelevated, somewhat indistinct costæ (exclusive of the sutural and lateral margins); the first and eighth, the second and seventh, and the third and sixth united at their apices. Interstices moderately punctured, the punctures of the second and following striæ geminated. Each elytron with two cyaneous spots, irregularly rounded,—the anterior covering the humeral angle, and projected for a short space into the deflexed lateral margin, reaching along the anterior margin nearly to the scutellum, and terminating posteriorly at one-fourth of the length of the elytron: its hinder interior angle truncated. The posterior spot is situated just behind the middle, equal in size to the anterior, slightly infringing upon the deflexed lateral margin, not touching the suture, and terminating posteriorly at five-sixths of the length of the elytron. Tarsi testaceous. The other characters are common to this and the two preceding species.

Hab. South America? From Thomson's collection.

Metaxyonycha humilis, sp. ined.

M. testacea, parallela, cylindrica; antennis testaceis; capite basi et post oculos infuscato; elytris thorace parum latioribus, hoc lateribus muticis, illis subseriatim punctatis, apicem versus costatis; utroque maculis binis baseos et fascia pone medium, postice emarginata, extus apicem versus producta, nigris.

Long. lin. $3\frac{1}{2}$, lat. hum. $1\frac{1}{6}$ lin.

Head smooth, shining, with a large punctured fovea between the eyes, and three impressed lines, forming a bisected triangle, of which the apex enters the fovea. Eyes large, black, and prominent. Mandibles tipped with black. Occiput dark brown, black behind the eyes; the dark tint extending forwards in the middle indeterminately. Thorax convex, subcylindrical, moderately rounded at the edentate sides, nearly as broad as the elytra, punctured, and, with the scutellum, reddish testaceous. Elytra paler testaceous, thickly but finely punctured, the punctures indistinctly arranged in striæ; the suture costate, and several smooth costæ visible near the apex. Each elytron with two oblong black basal spots, the outer one lunate, and including the humeral callus. An irregular black transverse fascia just behind the middle, touching the sutural margin, but not reaching the deflexed outer margin of the elytron; emarginate behind, and with its outer angle narrowly produced for a short distance towards the apex. Under surface and legs entirely testaceous.

This insect, by its cylindrical form and the smaller size of its spots, approaches *M. humeralis* and *M. tetrasticta*; and the three, with *M. testacea*, Fab., and others, form a group of allied species.

Brought from the Amazons by H. W. Bates, Esq.

Metaxyonycha quadrinotata, sp. ined.

M. testacea, antennarum articulis 4-12, nigris; thorace elytris angustiore, lateribus medio bisinuatis; elytris confertim, prope suturam seriatim punctatis, apicem versus costatis, costis lævibus; in singulo elytro maculæ duæ magnæ fusco-cæruleæ; antennæ crassiusculæ; tarsi subinfuscati.

Long. lin. $4\frac{1}{2}$ -5, lat. hum. $1\frac{3}{4}$ -2 lin.

Closely allied to *M. crucifera* (of which it may be a permanent local variety), but separated (1) by the thick antennæ, (2) by the punctuation of the elytra, (3) by the brownish-blue tint of the dorsal blotches. Head and thorax smooth, shining, with scattered punctures. A single punctured stria next the suture, followed, after a wide smooth interval, by a line of doubled punctures; the rest of the elytra hardly striato-punctate, except at the apex, where the usual eight smooth costæ become visible, their interstices punctured. Otherwise like *M. crucifera*.

Hab. Brazil. From Thomson's collection.

Metaxyonycha humeralis, sp. ined.

M. oblongo-ovata, subcylindrica, nitida, scite punctulata, testacea, oculis nigris; elytris punctato-striatis, cujusque striæ punctis geminatis, interstitiis lævibus, postice elevatis. Elytron utrumque maculis binis, parvis, rotundis, nigro-cæruleis, quarum altera major in ipso callo humerali sita, altera infra medium minima.

Long. lin. 4, lat. hum. $1\frac{1}{2}$ lin.

Front with three small foveæ, arranged in an arc above the antennæ and between the eyes. Thorax finely margined at the sides and base, with a scarcely visible sinus in the middle of each side; like the head, irregularly punctured and shining. Scutellum impunctate, shining, and, with the head and thorax, pale reddish testaceous. Elytra paler, broader at the base than the thorax, parallel for three-fourths of their length, thence to the apex conjointly attenuated and rounded, and in an equal degree deflexed from above: punctate-striate, the punctures geminated, the interstices shining, elevated posteriorly into four smooth costæ next the suture, and, after a wider interval, three more, of which the first is continued from the base to the apex, and connects the two cyaneous spots on their outer edges. On the humeral callus is a round cyaneous spot, angulated posteriorly, and behind the middle a much smaller discal dot.

Brought from the Amazons by H. W. Bates, Esq.

Metaxyonycha tetrasticta, sp. ined.

M. elongata, cylindrica, testacea; oculis, antennarum articulis 3-12, tarsis, maculis in utroque elytro binis rotundis nigris.

Long. lin. $4\frac{1}{2}$, lat. hum. $1\frac{1}{2}$ lin.

More elongate and cylindrical than the preceding, the elytra less convex, parallel for four-fifths of their length, more broadly rounded, and less suddenly deflexed posteriorly. Punctuation similar, but somewhat coarser; the interstices less conspicuous, except towards the costated apex. Eyes large and prominent. Uniformly reddish testaceous, the elytra paler and yellowish. Each elytron with two circular black spots, the anterior and larger situated near the base, equidistant from the suture and the outer margin; the other behind the middle, at the distance of two-thirds from the exterior margin, and one-third from the suture.

Hab. Brazil. Common in collections.

Metaxyonycha Tejucana, sp. ined.

M. maxima, castanea; oculis, mandibulis apice, antennarum articulis 4-12, tibiis extremis, tarsis nigris: oculis intus emarginatis; thorace mutico; elytris 8-costatis, inter costas seriatim punctatis; tibiis intermediis fortiter emarginatis.

Long. lin. 7, lat. hum. $2\frac{3}{4}$ lin.

Cognate with *M. tricolor*: front marked as in that species, with the addition of an impressed line upon the vertex, reaching the interocular fovea. Head and thorax with scattered punctures; the latter subquadrate, as broad in front as behind, moderately rounded at the sides, where it is broadly margined; only slightly convex, truncate anteriorly and at the base. Elytra broader than the thorax, more than four times its length, with eight smooth costæ visible from the base to the apex. The humeral callus shining and prominent. The fifth, sixth, and eighth costæ reach the callus, the seventh is abbreviated anteriorly. All the costæ are more distinct towards the sides and apex. Interstices punctate-striate, the punctures in single rows near the suture, afterwards doubled, tripled, and finally confused in the lateral spaces. Entirely castaneous, beneath paler; tibiæ darker, blackish at the apex.

It strongly resembles *Colaspis acuminipennis*, Blanch., figured in D'Orbigny's 'Voyage,' pl. 24. fig. 10.

Brought from Tejuca, Brazil, by the Rev. H. Clark.

Metaxyonycha amasia, sp. ined.

M. testacea, elytris læte cæruleis, nitidis, confertim subseriatim punctatis, apicem versus costatis; thorace lateribus bisinuato; oculis,

antennarum articulo quinto apice et sexto ad ultimum obscuris ;
tibiis intermediis vix leviter emarginatis.

Long. lin. $3\frac{3}{4}$, lat. hum. $1\frac{1}{3}$ lin.

Facies of *M. chloroptera*, Germ., but only one-third of its size, and without the testaceous limb of the elytra. Elongate cylindrical, subdepressed ; elytra parallel nearly to their apex, and then suddenly rounded. Front with a stellate fovea, above which it is broadly canaliculate. Head and thorax bright testaceous, thickly but not coarsely punctured ; the latter subquadrate, as broad before as behind, subtridentate or bisinuated at the sides. Scutellum testaceous, impunctate. Elytra densely punctate-striate, the interstices irregular ; somewhat rugose transversely on the disk, costate at the apex ; the third, fourth, and fifth costæ springing from a common stem near the apex. Under-side and legs clear testaceous.

Hab. Costa Rica. From Thomson's collection.

[To be continued.]

XXXVII.—*On the Moth of the Esere, or Ordeal-Bean of Old Calabar.* By THOMAS R. FRASER, M.D. Edin., Assistant to the Professor of Materia Medica in the University of Edinburgh.

THE REV. JOHN BAILLIE, of Old Calabar, recently presented me with a parcel containing about eighty seeds of *Physostigma venenosum*, which had been collected because of their showing indications of the attacks of an insect. In a paper on the *Esere*, or Ordeal-Bean of Calabar*, it is stated by me that "the bean has been always received remarkably free from all disease," only one form of slight and unimportant abnormality having been met with. It is therefore a source of gratification to me to have the first opportunity of modifying this expression.

These beans had been collected upwards of three months before they came into my possession. They were contained in a covering of thick soft paper, which was found to be riddled by numerous nearly circular holes, about the sixth of an inch in diameter ; and it was evident that these perforations had been caused by an insect. On opening the parcel, the beans were found adhering together by means of an abundance of silky threads. They were easily disconnected, and, on separation, a number of caterpillars were seen (generally alive, though sluggish in their movements), and a large quantity of what was evidently their excrement. The greater number of the cater-

* "On the Characters, Actions, and Therapeutic Uses of the Ordeal-Bean of Calabar," in 'Edinburgh Medical Journal,' July, August, and September 1863.